

Title (en)
PARTICLE-TOUGHENED POLYMER COMPOSITIONS

Title (de)
MIT PARTIKELN ZÄHFEST GEMACHTE POLYMERMASSEN

Title (fr)
COMPOSITIONS POLYMÉRIQUES RENFORCÉES PAR DES PARTICULES

Publication
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Application
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Abstract (en)
[origin: US2010305274A1] Particle-toughened polymer compositions include a base polymer formulation and a plurality of toughening particles. In certain embodiments, the base polymer formulation includes bismaleimides or other polymer resins capable of high temperature service. A first plurality of toughening particles may include core shell rubbers. A second plurality of toughening particles may be selected from a variety of polymer compositions, including polyimides, polyether ketone (PEK), polyether ether ketone (PEEK), polyether ketone ketone (PEKK), polyether imide, polyether sulfones, and polyphenylene oxide. It is found that increasing concentration of the core shell rubbers may improve the toughness of the composition while preserving thermal properties of the composition, such as glass transition temperature.

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